[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [65 FR 47660 8/3/2000]

[Docket No. 2000-NM-100-AD; Amendment 39-11843; AD 2000-15-11]

RIN 2120-AA64

Airworthiness Directives; McDonnell Douglas Model DC-8 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to certain McDonnell Douglas Model DC-8 series airplanes that have been converted from a passenger to a cargo-carrying ("freighter") configuration. This amendment requires a revision to the Airplane Flight Manual Supplement to ensure that the main deck cargo door is closed, latched, and locked; inspection of the door wire bundle to detect discrepancies and repair or replacement of discrepant parts. This amendment also requires, among other actions, modification of the hydraulic and indication systems of the main deck cargo door, and modification of the existing means to prevent pressurization to an unsafe level if the main deck cargo door is not closed, latched, and locked. This amendment is prompted by the FAA's determination that certain main deck cargo door systems and the existing means to prevent pressurization to an unsafe level if the main deck cargo door is not closed, latched, and locked, do not provide an adequate level of safety. The actions specified by this AD are intended to prevent opening of the cargo door while the airplane is in flight, and consequent rapid decompression of the airplane including possible loss of flight control or severe structural damage.

EFFECTIVE DATE: September 7, 2000.

ADDRESSES: Information pertaining to this AD may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Transport Airplane Directorate, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Michael E. O'Neil, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Transport Airplane Directorate, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5320; fax (562) 627-5210.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to certain McDonnell Douglas Model DC-8 series airplanes that have been converted from a passenger to a cargo-carrying ("freighter") configuration, was published in the **Federal Register** on May 16, 2000 (65 FR 31109). That action proposed to require a revision to the Airplane Flight Manual Supplement (AFMS) to ensure that the main deck cargo door is closed, latched, and locked; inspection of the door wire bundle to detect discrepancies and repair or replacement of discrepant parts. That action also proposed to require, among other actions, modification of the hydraulic and indication systems of the main deck cargo door, and modification of the existing means to prevent pressurization to an unsafe level if the main deck cargo door is not closed, latched, and locked.

Comments

Interested persons have been afforded an opportunity to participate in the making of this amendment. No comments were submitted in response to the proposal or the FAA's determination of the cost to the public.

Explanation of Change Made to Final Rule

Since the issuance of the proposed rule, the FAA has reviewed and approved installation of National Aircraft Service Inc. (NASI) Vent Door System Supplemental Type Certificate (STC) ST01245CH as an approved means of compliance with the requirements of paragraph (c) of the final rule. A new note (Note 3) has been added to the final rule to give credit for this installation, and the remaining notes have been renumbered accordingly.

Conclusion

After careful review of the available data, the FAA has determined that air safety and the public interest require the adoption of the rule with the change previously described. The FAA has determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

Cost Impact

There are approximately 5 Model DC-8 series airplanes of the affected design in the worldwide fleet. The FAA estimates that 4 airplanes of U.S. registry will be affected by this AD.

It will take approximately 1 work hour per airplane to accomplish the general visual inspections, at an average labor rate of $60 per work hour. Based on these figures, the cost impact of the general visual inspections required by this AD on U.S. operators is estimated to be $240, or $60 per airplane, per inspection cycle.

It will take approximately 1 work hour per airplane to accomplish the AFMS revision and installation of associated placards, at an average labor rate of $60 per work hour. Based on these figures, the cost impact of the AFMS revision and installation of associated placards required by this AD on U.S. operators is estimated to be $240, or $60 per airplane.

The FAA estimates that it will take approximately 210 work hours per airplane to accomplish the modification required by paragraph (c) of this AD, at an average labor rate of $60 per work hour. The FAA also estimates that required parts will cost approximately $45,000 per airplane. Based on these figures, the cost impact of this modification required by this AD on U.S. operators is estimated to be $230,400, or $57,600 per airplane.

The cost impact figures discussed above are based on assumptions that no operator has yet accomplished any of the requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted. The cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required by the AD. These figures typically do not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions.

Regulatory Impact

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption "ADDRESSES."

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding the following new airworthiness directive:

AIRWORTHINESS DIRECTIVE

REGULATORY SUPPORT DIVISION
P.O. BOX 26460
OKLAHOMA CITY, OKLAHOMA 73125-0460

U.S. Department
of Transportation
**Federal Aviation
Administration**

AD's are posted on the internet at http://av-info.faa.gov

2000-15-11 MCDONNELL DOUGLAS: Amendment 39-11843. Docket 2000-NM-100-AD.

Applicability: Model DC-8 series airplanes that have been converted from a passenger to a cargo-carrying ("freighter") configuration in accordance with Supplemental Type Certificate (STC) SA1862SO; certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been otherwise modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent opening of the cargo door while the airplane is in flight, and consequent rapid decompression of the airplane including possible loss of flight control or severe structural damage, accomplish the following:

Actions Addressing the Main Deck Cargo Door

(a) Within 60 days after the effective date of this AD, accomplish a general visual inspection of the wire bundle of the main deck cargo door between the exit point of the cargo liner and the attachment point on the main deck cargo door to detect crimped, frayed, or chafed wires; and perform a general visual inspection for damaged, loose, or missing hardware mounting components. If any crimped, frayed, or chafed wire, or damaged, loose, or missing hardware mounting component is detected, prior to further flight, repair in accordance with FAA-approved maintenance procedures.

NOTE 2: For the purposes of this AD, a general visual inspection is defined as "A visual examination of an interior or exterior area, installation, or assembly to detect obvious damage, failure, or irregularity. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or drop-light, and may require removal or opening of access panels or doors. Stands, ladders, or platforms may be required to gain proximity to the area being checked."

(b) Within 60 days after the effective date of this AD, revise the Limitations Section of the appropriate FAA-approved Airplane Flight Manual Supplement (AFMS) for STC SA1862SO by inserting therein procedures to ensure that the main deck cargo door is fully closed, latched, and locked prior to dispatch of the airplane, and install any associated placards. The AFMS revision procedures and installation of any associated placards shall be accomplished in accordance with a method approved by the Manager, Los Angeles Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate.

Actions Addressing the Main Deck Cargo Door Systems

(c) Within 18 months after the effective date of this AD, accomplish the actions specified in paragraphs (c)(1), (c)(2), (c)(3), (c)(4), and (c)(5) of this AD in accordance with a method approved by the Manager, Los Angeles ACO.

(1) Modify the indication system of the main deck cargo door to indicate to the pilots whether the main deck cargo door is fully closed, latched, and locked;

(2) Modify the mechanical and hydraulic systems of the main deck cargo door to eliminate detrimental deformation of elements of the door latching and locking mechanism;

(3) Install a means to visually inspect the locking mechanism of the main deck cargo door;

(4) Install a means to remove power to the door while the airplane is in flight; and

(5) Install a means to prevent pressurization to an unsafe level if the main deck cargo door is not fully closed, latched, and locked.

NOTE 3: Installation of National Aircraft Service Inc. (NASI) Vent Door System STC ST01245CH, is an approved means of compliance with the requirements of paragraph (c) of this AD.

(d) Compliance with paragraphs (c)(1), (c)(2), (c)(3), (c)(4), and (c)(5) of this AD constitutes terminating action for the requirements of paragraphs (a) and (b) of this AD, and the AFMS revision and placards may be removed.

Alternative Methods of Compliance

(e) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Los Angeles ACO. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Los Angeles ACO.

NOTE 4: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Los Angeles ACO.

Special Flight Permit

(f) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Effective Date

(g) This amendment becomes effective on September 7, 2000.

FOR FURTHER INFORMATION CONTACT: Michael E. O'Neil, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Transport Airplane Directorate, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5320; fax (562) 627-5210.

Issued in Renton, Washington, on July 28, 2000.

Donald L. Riggin, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

APPENDIX 1

Excerpt from an FAA Memorandum to Director-Airworthiness and Technical Standards of ATA, dated March 20, 1992

"(1) **Indication System**:

(a) The indication system must monitor the closed, latched, and locked positions, directly.

(b) The indicator should be **amber** unless it concerns an outward opening door whose opening during takeoff could present an immediate hazard to the airplane. In that case the indicator must be **red** and located in plain view in front of the pilots. An aural warning is also advisable. A display on the master caution/warning system is also acceptable as an indicator. For the purpose of complying with this paragraph, an immediate hazard is defined as significant reduction in controllability, structural damage, or impact with other structures, engines, or controls.

(c) Loss of indication or a false indication of a closed, latched, and locked condition must be improbable.

(d) A warning indication must be provided at the door operators station that monitors the door latched and locked conditions directly, unless the operator has a visual indication that the door is fully closed and locked. For example, a vent door that monitors the door locks and can be seen from the operators station would meet this requirement.

(2) **Means to Visually Inspect the Locking Mechanism**:

There must be a visual means of directly inspecting the locks. Where all locks are tied to a common lock shaft, a means of inspecting the locks at each end may be sufficient to meet this requirement provided no failure condition in the lock shaft would go undetected when viewing the end locks. Viewing latches may be used as an alternate to viewing locks on some installations where there are other compensating features.

(3) **Means to Prevent Pressurization**:

All doors must have provisions to prevent initiation of pressurization of the airplane to an unsafe level, if the door is not fully closed, latched and locked.

(4) **Lock Strength**:

Locks must be designed to withstand the maximum output power of the actuators and maximum expected manual operating forces treated as a limit load. Under these conditions, the door must remain closed, latched and locked.

(5) **Power Availability**:

All power to the door must be removed in flight and it must not be possible for the flight crew to restore power to the door while in flight.

(6) **Powered Lock Systems** :

For doors that have powered lock systems, it must be shown by safety analysis that inadvertent opening of the door after it is fully closed, latched and locked, is extremely improbable."